

Minimalistic Compositional Techniques: 'Glass' By Hania Rani

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ABSTRACT

The purpose of this paper is to investigate the minimalist techniques used in minimalist compositions and to identify the minimalist technique characteristics that cause listeners to perceive the music as minimalist music. This paper also provides information to other composers who require time to learn and familiarise themselves with minimalist techniques. This research seeks to identify the various minimalistic approaches and investigate the melodic progression of "Glass" by Hania Rani, a Polish composer and pianist, and how it has been creatively employed in her composition. The findings from this research will tremendously assist composers and pianists in getting a deeper knowledge of theory and minimalist concepts or procedures. Moreover, the piece 'glass' by Hani Rani is not widely known, and this investigation indirectly introduced the reader to contemporary minimalist composition.

Keywords: *Minimalism, Minimalistic Techniques, Music Composition, Piano*

INTRODUCTION

In relation to music, what does minimalism mean? Why have so many authors applied a phrase from the language of art historians to music? In music, minimalism has been defined as an aesthetic, a style, and a technique, each of which has supplied an adequate explanation of the term at different stages of its development. In addition, several of the most well-known minimalist composers in the world, including Philip Glass and Steve Reich. Some younger composers, including Hania Rani, frequently compare themselves to Philip Glass. Through this exploration of the term, we intend to illustrate that minimalism can be successfully defined as a strategy by describing the various types of minimalism.

There are numerous reasons why minimalist compositions appeal to listeners. There is no rite of passage typical of many avant-garde forms that requires listeners to be familiar with the composer's musical beliefs and perspectives to enjoy it. The fact that minimalism is so repetitive should not be

viewed as a weakness, but as one of its most distinguishing and alluring characteristics. The research objectives underlying this study are:

1. To investigate the melodic development in 'Glass' by Hania Rani
2. To investigate the minimalistic techniques used in 'Glass' by Hania Rani

LITERATURE REVIEW

Life of Hania Rani

Hania Rani is a pianist, composer, and musician with residences and places of employment in both Warsaw and Berlin. She has composed for strings, piano, vocal, and electronics, and has collaborated with artists including Christian Löffler, Dobrawa Czocher, and HiorChronik. She has performed at some of the most famous venues and festivals in Europe, including the National Philharmonic in Warsaw, the Funkhaus in Berlin, and The Roundhouse in London, as well as Open'er, Scope Festival, and Eurosonic. Her solo piano works were inspired by a fascination with the piano as an instrument and a desire to explore all of its sonic and harmonic possibilities in a manner that was uniquely her own.

Rani grew up in Gdansk, surrounded by music and films, with her parents (a doctor and an architect) (a doctor and an architect). Initially attracted to classical music, she was introduced to jazz and electronics at music school, extending her horizons and, in her words, "mixing Chopin and Schostakovich with Dave Brubeck and Moderat." Among the composers that have affected her are Max Richter, Esbjorn Svensson, Miles Davis, Nils Frahm, Murcof, Portico Quartet, Radiohead, and even The Beatles. Not only does Rani draw inspiration from music, but also from the locations she has lived and visited. The visual arts can also inspire creativity. Her father was an architect, and she has always been interested in the arts. In fact, for Rani, an image or colour often comes first; she calls this a "sound image." (Records, 2020)

'Glass tone' technique

Since almost a century ago, physicists and musicians have discussed whether the sound of an isolated piano tone is purely influenced by the final hammer velocity, or if a pianist may alter the piano's timbre by altering the way the keys are struck, regardless of hammer velocity (Bryan, 1913). Pianists study for decades (KA Lehman, 1996) to develop a sophisticated technique for touching the keys so that the resulting sound fulfils their high aesthetic standards (Gerig, 1974). In order to gain subtle timbre subtleties and convey their interpretation of the music to the listener, they construct and practise a large inventory of diverse key press actions (Neuhaus, 1973).

Different techniques of contacting the keys were researched about a century ago (Ortmann, 1925). The kinematic properties of keys played with different touch types were investigated. Using a piece of smoked glass attached to the side of a piano key against which a vibrating tuning fork leaves sinusoidal imprints, he observed the precise acceleration patterns of the key presses (differences in key velocity being mirrored in variations in the wavelength of the recorded fork signals). (Otto, 1929) A "percussive" and a "non-percussive" touch were identified. The former is characterised by a finger impacting the surface of the key with a specified velocity, causing the key to accelerate very rapidly. With the last touch, the finger rests on the key's surface and pushes the key in a rhythm that gradually accelerates. Similar antagonisms have been studied since then. "hard" against "soft" touch (Friberg, 1964) and "struck" versus "pressed" touch (Suzuki, 2007).

In "Glass," Hania Rani attempts to replicate the sound of glasses clinking together. According to one of her interviews she mentioned that "The shimmering "Glass" captures/reflects the playfulness and multitude of colours and timbres like a piece of glass glowing in the light." (Rani, Interia Muzyka, 2019). Instead of listening to pre-recorded audio, Rani stated that she leaves the 'clattering' sound of the piano

hammers in order to recreate the live mood. It was a purposeful decision taken by both Rani and her sound engineer. Since they are aware that these technical noises have no place in classical music and that sound engineers frequently do audio cleanup in post-production, she chose to incorporate them into her work. Hania Rani opted for a different technique, transforming the tiny sounds into music and, on occasion, character, or ambiance. With the goal of the listener listening to it through the instrument. In this instance, she believes that the existence of these microscopic sounds will make the record engaging in some manner (Rani, 2019).

Minimalist techniques

Minimal music emphasises the elements that were eliminated from serialist style, such as repetition, regular pulse, diatonic and tonal structures. In addition to the previously listed techniques, phase shifting is a common minimalist composing method (Beirens, 2003). Steve Reich developed slow phase shifting in *It's Gonna Rain* (1965) and studied it in other works prior to *Drumming* (1971). In contrast, Rani's *Glass* has utilised the phase shifting method in her work. Jazz performers, particularly John Coltrane, certainly impacted composers like Terry Riler, Steve Reich, and Philip Glass to write in a distinctly modal style (Beirens, 2003). In general, Rani's minimal music does not utilise the modal scales that are characteristic of the music of American composers such as Riley and Glass. Although Rani mentioned that Philip Glass and a few other jazz musicians are her primary influences, she did employ a diatonic approach in her pieces.

Minimal music, on the other hand, possesses a level of aesthetic redundancy unmatched by even the finest pieces. There are several long sustained tones, recurring rhythmic, melodic, and/or harmonic patterns, cells, and phrases (Heisinger, 1989). In addition, Glass employs incremental harmonic shifts that juxtapose tonally useful chords with embellishing chords to emphasise the dramatic nature of his work (Sanchez-Behar, 2021).

METHODOLOGY

In order to acquire deeper information on this subject, observations were made, for instance examining the music score and monitoring the audio-visuals. First, information about minimalistic compositional techniques: 'glass' by Hania Rani was gathered from a variety of current sources, including journals, essays, and e-books. Next, musical scores were evaluated to further comprehend Hania Rani's *Glass*'s use of minimalist creative approaches. The score analysis was done simply on the introductory extract and the targeted part. In addition, an analysis of the minimalistic method component of the audio-visuals of "Glass" has been made. This analysis was conducted on the videos acquired from YouTube channels.

Findings and Discussion

The aim of this study is to investigate the melodic development in "Glass" and to examine Hania Rani's applications of minimalistic techniques in her composition "Glass". This piece is a new composition that gives a minimalist atmosphere when listening to it. Findings are presented based on the results and data analysis. It is to be informed that the focus of this research is to point out what are the types of minimalistic techniques that are used and how it is innovatively applied in this music. Apart from that, it could also be considered through other aspects of music such as the harmonies, chord progression, and the melodic development. Harmonic, melodic, and structural analysis has been performed on the scores, which have been divided into seven sections labelled A through G to ease comprehension.

In terms of general analysis, it can be determined that the work is in the mode of C# minor. This piece has a pace of 108 beats per minute, and the rhythmic patterns are continually shifting with some repetition throughout the entire portion. Furthermore, there are no specific accented notes, slurs, or other

dynamic markings in this score, indicating that it is relatively basic in terms of dynamic markings. Hania Rani intended for the players to interpret her piece "Glass" in their own way.

To undertake a comprehensive melodic analysis, the melody is broken down into crotchets and minims. This is accomplished by simply taking the notes on beats 1 through 4 for the crotchet reduction and beats 1 and 3 for the minim reduction, which are the strong/accented beats in 4/4 metre time (Figure 1 and 2). Through the crotchet reductions, the conceivable variation patterns are evaluated, and the contour of the melody is analysed through the intervals of the minim reductions.



Figure 1. Example of crotchet reduction of the melody
(Source: Author's collection)



Figure 2. Example of crotchet reduction of the melody
(Source: Author's collection)

From the A Section (Bar 1 to 8), the phrasing of the melody from the intro is symmetrical in terms of the number of bars. These phrases create a symmetrical phrasing as they all share the same number of bars which is 2, thus having the intro sound more balanced. In terms of piano left-hand techniques, there is the usage of ostinatos which changes every 2 bars. It is a characteristic of minimalist style that rhythmic or melodic motifs seldom recur over a section or work. In the B section (Bar 9 to 28), the chord progression is in diatonic chord, and the left hand played arpeggios throughout the section. For the melody, there are three specific patterns which were repeated throughout the section. The pattern in Bar 10 is repeated in bar 16, pattern in bar 17 is repeated 4 times (Bar, 19, 21, 23 and 27) and the pattern in bar 20 is repeated in bar 24 and 28. The primary modification or addition to section C (Bars 29 to 46) would be the inclusion of Borrowed chords. These borrowed chords appear in bar 31, 35, 39, 41 and 43. There is also an augmentation melodic development which occurs in bar 46. The majority of section D is a duplication of sections A, B, and C. Similar to the repeat of melodic motives in section B, this is a larger repetition that occurs throughout the whole section.

The completion of the score analysis effectively conveyed Research Objectives 1 and 2 and determined the solutions to both Research Questions. Hania Rani makes heavy use of minimalistic ideas in her piece "Glass." We may also observe how the piece's melodic developments indicate its use. The

examination of these two Research Objectives demonstrates that this composition has a positive effect on both the performer and the listener.

In terms of chord progression, Hania Rani included borrowed chords into her composition to differentiate it from diatonic chords and impart a new atmosphere. Borrowed chords are frequently used as "colour chords" to provide harmonic diversity by employing contrasting scale types, such as major and minor scales. In addition to the major and minor modes, chords can also be derived from other parallel modes, such as D Dorian and D major (Bouchard, 2007). Table 1 displays the bars in which Hania Rani utilised borrowed chords in her composition:

Table 1. Borrowed Chords Utilised In 'Glass' by Hania Rani

Chord Type	Bars
Borrowed Chords	31
	35
	39
	41
	43
	49
	77
	80
	85
	89
	93
	94
	97
	98
	101 - 104
Diatonic chords	Remaining Bars

Arpeggios, often known as broken chords, are widely used in minimalist music. Well-known composer Philip Glass is noted for his use of ostinato, arpeggio, and repeated rhythms, as well as his jazz inspirations (Ho & Rodriguez, 2019) This is all included in Rani's piece "Glass." The left-hand ostinato is continually shifting every two bars according to the chord sequence employed in the composition. The table below displays the frequency of left-hand arpeggio use.

Table 2. Frequency of Arpeggios in 'Glass' By Hania Rani

Arpeggios On The Left Hand
Bar 1- 2
Bar 8 – 9
Bar 5 -6
The Whole Page 2
Bar 19 – 24
Bar 27 – 28
Bar 47 – 48
Bar 51 – 59
The Whole Page 7
Bar 70
Bar 73 – 74
Bar 105 – 106
Bar 109
The Whole Page 12

After analysing the melodic advancements, we can determine that Hania Rani has 42 distinct melodic variants, bringing us back to Research Objective 1. Table 3 illustrates the repeated modifications to the melody throughout the piece. According to the obtained data, variety 12 is the most widespread variant.. Because it is simpler to analyse the melody in terms of variations, the melody has been organised into four crochets in a single bar.

Table 3. Repeated Melodic Variants in 'Glass' By Hania Rani

Variant	No. of Times repeated	Variant	No. of Time Repeated
1	13	13	3
2	4	14	6
3	5	15	4
4	7	16	8
5	6	17	5
6	4	18	2
7	3	19	4
8	2	20	6
9	2	21	2
10	2	22	2
11	3	23	2
12	10	26	2

From the same grouping of melodies, we can also see that the beginning notes of each melody are those listed in Table 4. The most prevalent note is G, whereas A and A# are used the least. The G note is also the most often utilised note in Rani's composition. Drone is one of the most notable characteristics of minimalist music. A drone is a lengthy, continuous note or a sound that is continuously repeated.

Table 4. Starting pitch (notes) in 'Glass' By Hania Rani

Pitch (note)	No. of Times
A	1
C	12
D	10
E	29
F	5
G	62
A#	1

In table 5, the melody is presented as two minims per bar. The notes that have been transcribed represent the melody's emphasis (beat 1 and 3). The stress pattern in common time is "strong, weak, strong, weak." It doesn't matter what the actual rhythm is, the underlying stress pattern is indicated on top. Any rhythms performed in this metre will have this stress pattern. Table 5 reveals that the most prevalent interval is the Perfect 8th, while the least utilised interval is the Major 6th and Hania Rani did not use the Major 7th interval in her work "Glass."

Table 5. Intervals in minim reduction of the melody in 'Glass' By Hania Rani

Interval	No. of Times
Minor 2 nd	2
Major 2 nd	11
Minor 3 rd	2
Major 3 rd	16

Perfect 4 th	9
Perfect 5 th	6
Minor 6 th	12
Major 6 th	1
Minor 7 th	13
Perfect 8 th	44
Unison	2

A composition in 4/4 metre can be interpreted in a variety of ways. If the work is played at a very slow pace and includes several subdivisions of each quarter note value, the metrical organisation can be interpreted as having four fundamental pulse-beat units. This might provide a metric interpretation of a measured pulse-beat mode with one half-note primary pulse-beat unit and one half-note secondary pulse-beat unit, while the piece is being performed at a rapid speed. Regardless of whether pulse-beat grouping is selected, that grouping often recurs frequently throughout a performance (Ulrike Halsband, 1994). Figure 3 below depicts the melody's underlying motif; to hear the melody's prominent notes (those with a higher-sounding pitch), one must hear the motif's underlying motif.

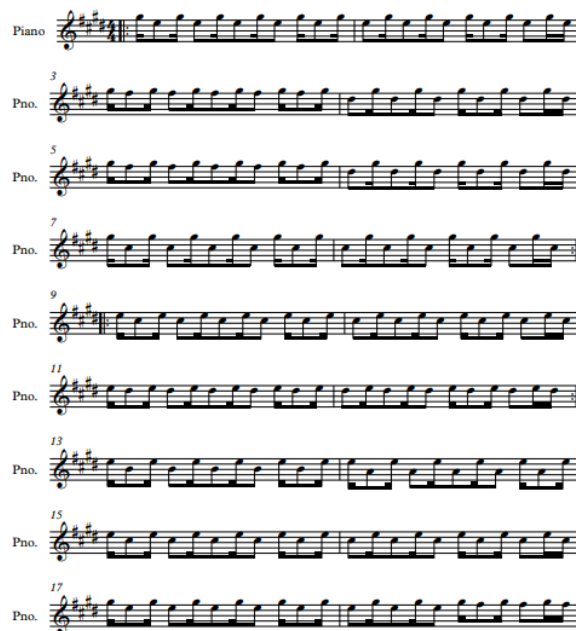


Figure 3. Glass Melody
 (Source: Author's collection)

The performance interpretation analysis was gathered from a YouTube video of Hania Rani performing her piece "Glass" at Studio S2, Poland, which was shot on YouTube. It is evident from her performance that the sound engineer utilised the A-B miking technique and a variety of microphones to obtain the 'glass tone.' Using the spaced-pair (or A-B) approach, two microphones are positioned several feet apart and pointed directly at the musical ensemble (Figure 3). The microphones may have any polar pattern, although the omnidirectional pattern is the most common for this technique. The larger the mic separation, the wider the stereo dispersion. (Barlett, 2006).

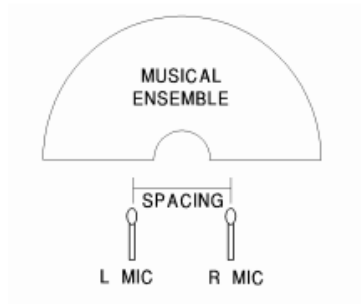


Figure 4. Example of A-B miking technique



Figure 5. Hania Rani performing her piece “Glass”, filmed in Studio S2, Poland
(Source: https://www.youtube.com/watch?v=l0yRNQj2_tc)

CONCLUSION & RECOMMENDATIONS

In conclusion, modern composers use a variety of creative strategies, particularly minimalism compositional. Hania Rani is a Polish pianist who draws inspiration from both jazz and classical music. Much of her works feature minimalism and jazz or more improvisational characteristics. Utilising touch, pedalling, overtones, and the balancing of simultaneous layers of dynamics, pianists produce hues. Changes in any of these areas will alter the piano's sound, and there are variations within each of these categories. However, sound engineers have a significant part in executing the piano's sound by employing various miking techniques. Moreover, the melodic developments and usage of minimalistic approaches in this work greatly aid composers and pianists in gaining a deeper understanding of theory and minimalist concepts or procedures. In addition, this work is not well recognized, and this research indirectly introduced the reader to current minimalist composition. This study's findings will assist not only students, but also society as a whole, particularly composers who are interested in sound engineering and experimenting with sound in general, and will add to our understanding of the methodologies of various miking approaches.

The researcher advises composers to include minimalist methods into their work. To produce a composition that is basic yet successful, they must delve further into minimalist themes and listen to more minimalist music. The popularity of minimalism can be traced in part to its harmonic accessibility and dynamic rhythms. Its works make use of the psychology of rhythm and highlight the mathematics of augmentation, diminution, and subdivision, as well as the cadence's varying textures and dynamics. The simplest musical methods may be the most interesting in terms of producing a bewitchingly powerful attraction, and minimalism has utilised absolute simplicity to highlight the subtlest transitions while maintaining complexity.

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